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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,353	01/05/2007	Jean-Charles Guibert	287990US2PCT	9372
22850	7590	04/02/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER JELSMA, JONATHAN G	
			ART UNIT	PAPER NUMBER
			1795	
			NOTIFICATION DATE	DELIVERY MODE
			04/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/572,353	Applicant(s) GUIBERT, JEAN-CHARLES	
	Examiner Jonathan Jelsma	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 4-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/13/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. This is the initial office action based on application 10/572,353 filed 03/16/2006 by Jean-Charles Guibert.
2. Claims 1-10 are currently pending and have been fully considered.

Claim Objections

3. Claims 4-7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend upon other multiple dependent claims. See MPEP § 608.01(n). Accordingly, the claims 4-7 have not been further treated on the merits.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over RUCHHOEFT ("Patterning curved surfaces: Template generation by ion beam proximity lithography and relief transfer by step and flash imprint lithography") in view of YUASA (US 2003/0104287 A1).
7. With respect to claims 1-2. RUCHHOEFT teaches a method of creating a template, or mask (page 2966 paragraph 1). The method includes the step of forming a pattern into a quartz substrate (page 2966 paragraph 1). There is an additional step of transferring the pattern onto a curved substrate (page 2966 paragraph 3).
8. RUCHHOEFT does not explicitly teach that the patterns are made on an SOI structure.
9. YUASA however, teaches a method of patterning a SOI masking layer (abstract). The SOI blank includes a semiconductor material 11, insulating, or box layer 12 on a silicon base layer 13 (figure 3A). The SOI structure may then be patterned (paragraphs 0085-0088).
10. At the time of the invention one having ordinary skill in the art would have been motivated to pattern the SOI substrate as taught by YUASA in the method of making the mask of RUCHHOEFT since the SOI substrate of YUASA is a known type of substrate, useful for example in electron beam lithography (YUASA paragraphs 0008 and 0013). Therefore, one having ordinary skill in the art would have been capable of choosing the SOI substrate for the production of the mask of RUCHHOEFT would have yielded

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predictable results, since YUASA teaches the SOI substrate as being a prior art known type of substrate for electron beam lithography.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over RUCHHOEFT ("Patterning curved surfaces: Template generation by ion beam proximity lithography and relief transfer by step and flash imprint lithography") in view of YUASA (US 2003/0104287 A1) and further in view of YUKI (US 2003/0054601 A1).

12. Claim 3 is dependent upon claim 1 or 2, which are rejected above in view of RUCHHOEFT and YUASA. However, neither RUCHHOEFT nor YUASA explicitly teaches thinning the SOI structure.

13. YUKI however teaches that a method of thinning the SOI substrate is part of a well known method of forming the SOI substrate, such as thinning the silicon wafer by polishing (paragraph 0053).

14. Therefore, at the time of the invention one having ordinary skill in the art would have been motivated to thin the SOI substrate as taught by YUKI as a matter of routine practice in the method of producing the SOI substrate, such as of RUCHHOEFT and YUASA.

15. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over KLOSNER (US 6,416,908 B1) in view of RUCHHOEFT ("Patterning curved surfaces: Template generation by ion beam proximity lithography and relief transfer by step and flash imprint lithography").

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16. KLOSNER teaches a mask comprising a polypropylene stretched over a fused silica blank, which creates a curved mask (column 9 lines 14-16). The curved fused silica blank is the support, and the mask comprises a plurality of patterns (figure 5).

17. The mask of KLOSNER is a polypropylene mask, and not explicitly taught comprising silica or nitride.

18. RUCHHOEFT however, teaches a method of forming a curved mask which comprises a silica substrate (page 2966 paragraph 3).

19. At the time of the invention one having ordinary skill in the art would have been motivated to use the silica curved mask of RUCHHOEFT on the support of KLOSNER, since KLOSNER teaches that the use of the mask may be used to fabricate further imaged mask (column 9 lines 19-33), and RUCHHOEFT teaches a prior art curved mask that may be substituted as a matter of routine experimentation by one having ordinary skill in the art.

Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Jelsma whose telephone number is (571)270-5127. The examiner can normally be reached on Monday to Thursday 7:00 a.m. - 4:00 p.m.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on (571)272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark F. Huff/

Supervisory Patent Examiner, Art Unit 1795

JGJ